

REMARKS

This paper responds to the Office Action mailed on December 3, 2004.

Claims 109, 113, 117, and 130 are amended, claim 131 is canceled without prejudice or disclaimer, claims 10-12, 14-20, 22-25, 27-33, 35, 109, 111-113, 115, 117, 119-121, 123-125, 128-130 are now pending in this application.

Claims 109, 113, 117, and 130 are amended for clarity.

Claim Objections

Claims 24, 25, 32, and 35 were objected to for being identified as being “withdrawn”. Applicant has changed the status identifier for these claims to “original”.

Claim 113 was objected to because of informalities. Claim 113 has been amended from “a dielectric layer” to “the dielectric layer” as the claim references the same layer, but at different steps in the method claim.

§112 Rejection of the Claims

Claims 109, 111-113, 117, 119, 120, 130, and 131 were rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Applicant traverses the rejection on all claims as the claims are definite as filed. Claims 109, 113, 117, and 130 have been amended for clarity. Claim 131 is canceled without prejudice. Claims 111, 112, 119, and 120 depend from the amended claims and are now presumed in allowable condition.

§102 Rejection of the Claims

Claims 109, 113, 117, 130, and 131 were rejected under 35 USC § 102(b) as being anticipated by Dennison (U.S. Patent No. 5,206,183). Applicant respectfully traverses.

Claim 109 recites, in part, “forming a sacrificial layer in at least one of an interior of the conductive container structure and outside the sidewalls of the conductive container structure; forming a dielectric cap on a top of the sidewalls and sacrificial layer, wherein forming a dielectric cap on top of the sidewalls and sacrificial layer includes forming a dielectric layer on

the top of the sidewalls and sacrificial layer and removing the dielectric layer from the sacrificial layer; removing at least a portion of the sacrificial layer; and using the dielectric cap as part of the dielectric layer.” Applicant cannot find these features in Dennison. Any dielectric cap structure shown in Dennison may have been formed by a low temperature thermal oxidation to convert any exposed storage node poly into silicon oxide, and not deposited as a dielectric layer. Accordingly, applicant submits that claim 109 is allowable over Dennison. Reconsideration of the rejection and allowance of claim 109 are requested.

Claim 113 recites, in part, “forming a dielectric cap on a top of the sidewalls, wherein the dielectric cap comprises at least one dielectric material selected from the group consisting of oxides, nitrides and silicon oxynitrides, and wherein forming a dielectric cap on top of the sidewalls includes forming a first dielectric layer on an insulating layer, a conductive layer of the conductive container structure and a fill layer adjacent the sidewalls of the conductive container structure, and removing the first dielectric layer from the insulating layer and the fill layer.” Applicant cannot find these features in Dennison. Dennison does not show the steps of forming a dielectric cap on top of the sidewalls in which a dielectric layer is formed on an insulating layer, a conductive container structure and a fill layer. Nor does Dennison show the removal of the dielectric layer from the insulating layer and the fill layer. Accordingly, applicant submits that claim 113 is allowable over Dennison. Reconsideration of the rejection and allowance of claim 113 are requested.

Claim 117 recites, in part, “forming a dielectric cap on a top of the sidewalls and a fill layer in the container structure, wherein forming a dielectric cap on top of the sidewalls and fill layer includes forming a dielectric layer on the top of the sidewalls and fill layer and removing the dielectric layer from the fill layer; removing at least a portion of the fill layer; forming a dielectric layer on the conductive container structure and including the dielectric cap.” Applicant cannot find these features in Dennison. As similarly stated above, Dennison does not show the steps of forming a dielectric cap on top of the sidewalls in which a dielectric layer is formed on the top of the sidewalls and on a fill layer. Any dielectric cap structure shown in Dennison, although not similar in structure or purpose, may be formed by an oxidation process and not by the forming and manipulation of a dielectric layer on a fill layer. Accordingly, applicant submits

that claim 117 is allowable over Dennison. Reconsideration of the rejection and allowance of claim 117 are requested.

§103 Rejection of the Claims

Claims 111-113, 119, and 120 were rejected under 35 USC § 103(a) as being unpatentable over Dennison as applied above, and further in view of Lur et al. (U.S. Patent No. 5,364,817) and Abernathy et al. (U.S. Patent No. 4,725,560). Applicant respectfully traverses.

Claims 111 and 112 each depend from claim 109. Applicant submits that claim 111 and 112 are allowable for the same reasons as stated above with regard to claim 109. Specifically, Applicant submits that Lur and Abernathy do not cure the defects in Dennison as a reference against claims 109, 111 and 112. Allowance of claims 111 and 112 is requested.

Claim 113 recites, in part, “forming a dielectric cap on a top of the sidewalls, wherein the dielectric cap comprises at least one dielectric material selected from the group consisting of oxides, nitrides and silicon oxynitrides, and wherein forming a dielectric cap on top of the sidewalls includes forming a first dielectric layer on an insulating layer, a conductive layer of the conductive container structure and a fill layer adjacent the sidewalls of the conductive container structure, and removing the first dielectric layer from the insulating layer and the fill layer.” Examiner’s §103 rejection of claim 113 relies on the success of the previously mentioned §102 argument. As Applicant argues, the forming of a dielectric cap and layer, as stated in claim 113, is not anticipated by Dennison, and therefore, there are no grounds in the §103 argument in which to compare the similar deficiencies in Lur and Abernathy. Dennison does not disclose, nor does Lur or Abernathy teach the formation of the dielectric cap and layer in claim 113. Allowance of claim 113 is requested.

Claims 119 and 120 each depend from claim 117. Applicant submits that claims 119 and 120 are allowable for the same reasons as stated above with regard to claim 117. Specifically, Applicant submits that Lur and Abernathy do not cure the defects in Dennison as a reference against claims 117, 119, and 120. Allowance of claims 119 and 120 is requested.

Allowable Subject Matter

Applicant acknowledges the allowance of claims 10-12, 14-20, 22-25, 27-33, 35, 115, 121, 123-125, 128, and 129.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney (612) 349-9587 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

GURTEJ S. SANDHU ET AL.

By their Representatives,

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
P.O. Box 2938
Minneapolis, MN 55402
(612) 349-9587

Date

3 Feb '05

By

Timothy B Clise
Reg. No. 40,957

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop AF, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 3rd day of February, 2005.

Name

Tina Kohut

Signature

Z. U. K.